

Weekly Report for 2015/06/29-2015/07/05

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Progress

1. TCPTree Project

This week I continue implementing TCPTree. I finished the main view and the interaction of expanding the root node and viewing the time partitioned nodes. But I think the design of each node is not very clear. We encoded four variables, which are x_2y , y_2x , diff, and total, on the line between two attributes, but it's not necessary to encode them all because $\text{diff} = x_2y - y_2x$ and $\text{total} = x_2y + y_2x$. Besides, a complete graph looks messy. I think it's better to change the design of the main view.

The problem of the complete graph design:

1. The lengths of the lines in the design don't encode anything, but the difference of the lengths may mislead the users.
2. There are so many lines in the design, makes it hard to get useful information.
3. The color encoding is not very useful because it only indicates the direction of the relationship between two attributes.

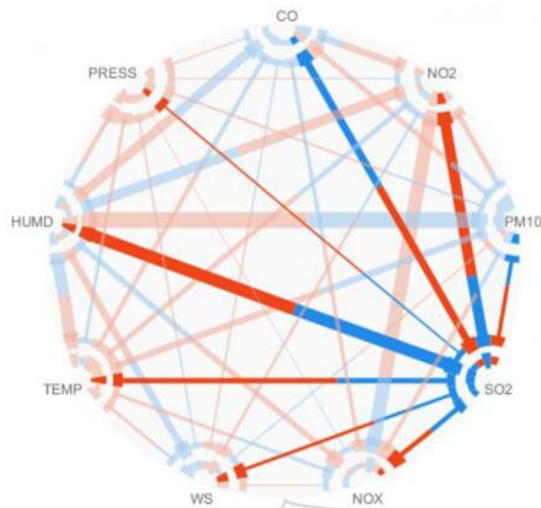


Figure 1

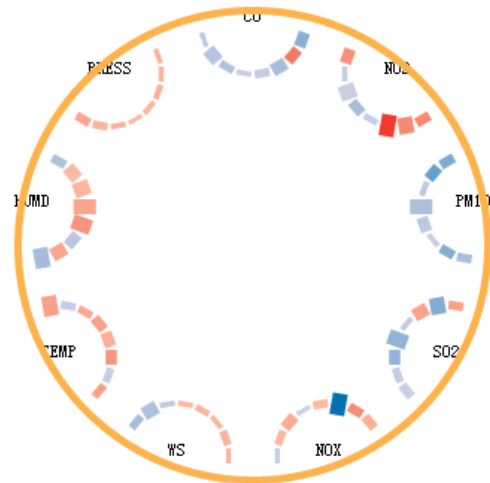


Figure 2

After discussing with Feiran, we decide to use the design in Figure 2. We only encode diff and total. Diff is encoded by the color of the bar and total is encoded by the height of the bar. From figure 1 and figure 2 we can see that it's easier to focus on HUMD, NO2 and NOX in figure 2 than in figure 1.

In figure 2, it's also easier to know that NO2 and NOX has strong relation and NO2 effect NOX significantly.

We also noticed that in figure 2 there is space in the center of the node. We plan to move the annotation view into each node. The annotation view can be generated automatically or interactively.

2. Big Data Group Meeting

3. Revise vis 2015 submission

Plan

1. TCPTree Project

Finish the interactions in the main view.

2. Revise vis2015 submission

Search the theoretical basis of this work.